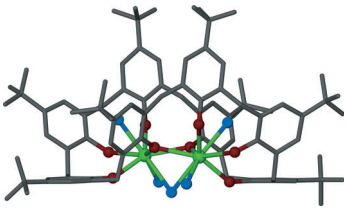
On these pages, we feature a selection of the excellent work that has recently been published in our sister journals. If you are reading these pages on a computer, click on any of the items to read the full article. Otherwise please see the DOIs for easy online access through Wiley Online Library.

Calixarenes

S. M. Taylor, S. Sanz, R. D. McIntosh, C. M. Beavers, S. J. Teat, E. K. Brechin,* S. J. Dalgarno*

p-tert-Butylcalix[8]arene: An Extremely Versatile Platform for Cluster Formation

It's all metalled: *p-tert*-Butylcalix[8]arene (see structure) is a flexible ligand that has been shown to form a common dinuclear lanthanide complex. This can be used as a building unit in the construction of larger polynuclear metal complexes by varying reactant ratios and conditions employed in synthesis. This approach facilitates access to new Ln_4, Ln_5, Ln_6, Ln_7 and Ln_8 clusters.



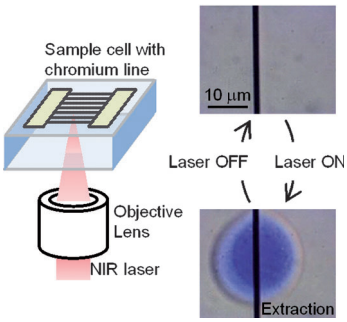
Chem. Eur. J.
DOI: **10.1002/chem.201202644**

Polymers

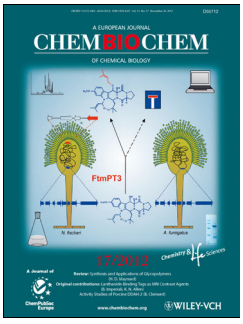
H. Inoue, T. Yamamoto, S. Kuwahara, K. Katayama*

Local Extraction and Condensation under a Microscope Using the Optically Controlled Phase Separation of a Thermoresponsive Polymer

Local heat advisory: In-situ extraction/condensation of various dyes was carried out in a local phase-separation region of a thermoresponsive polymer aqueous solution, which was induced through heating by an NIR laser under a microscope. A necessary condition for extraction/condensation is the hydrophobicity of the dye, and the main reason for the condensation is the molecular interaction between the side chain of the polymer and the functional group of the dyes.



Chem. Asian J.
DOI: **10.1002/asia.201200591**

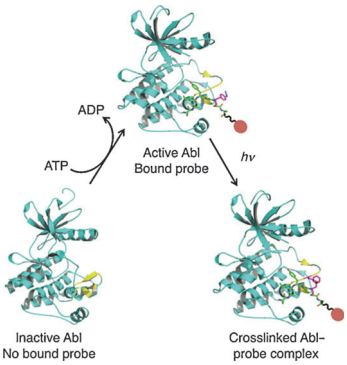


Protein Kinases

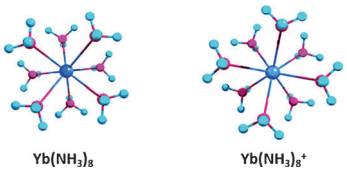
Y. Deng, B. A. Couch, A. J. Koleske, B. E. Turk*

A Peptide Photoaffinity Probe Specific for the Active Conformation of the Abl Tyrosine Kinase

An Abl label: The design of sensors to monitor the activity state of specific protein kinases is challenging due to the complexity of eukaryotic kinomes. Here we describe a peptide-based photoaffinity probe that specifically labels the active conformation of the Abl tyrosine kinase.



ChemBioChem
DOI: **10.1002/cbic.201200560**



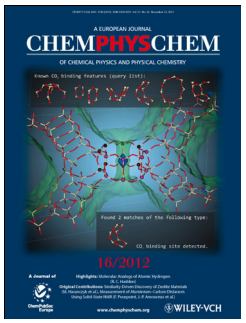
Rare-Earth Complexes

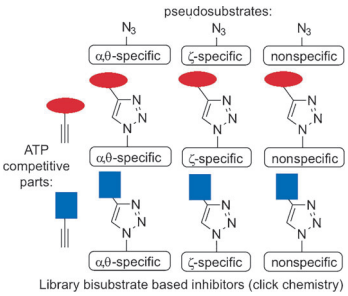
M. J. Guttridge, S. H. Don, A. M. Ellis*

Photoionization of $Yb(NH_3)_n$ Complexes

Come on inside: The ionization energies of complexes between a rare-earth metal (Yb) and ammonia were measured for the first time using photoionization mass spectrometry and the finding are supported by calculations. The results are consistent with the formation of "interior" complexes in which the Yb atom is embedded within a shell of NH_3 molecules, rather than sitting on the surface of an $(NH_3)_n$ cluster (see picture).

ChemPhysChem
DOI: **10.1002/cphc.201200691**





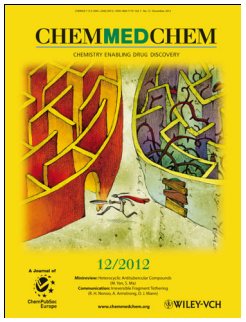
Kinase Inhibitors

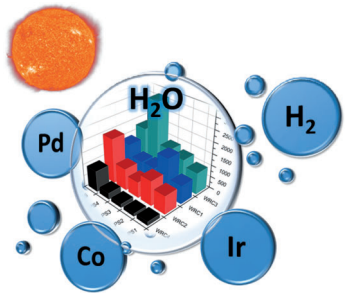
L. T. M. van Wandelen, J. van Ameijde, A. S. A. Mady, A. E. M. Wammes, A. Bode, A. J. Poot, R. Ruijtenbeek, R. M. J. Liskamp*

Directed Modulation of Protein Kinase C Isozyme Selectivity with Bisubstrate-Based Inhibitors

More than the sum of its parts: A modular approach to tuning the selectivity of bisubstrate-based inhibitors towards highly homologous protein kinase C isozymes is explored. By systematically varying the ATP-competitive and pseudosubstrate peptide components, selectivity could be effectively modulated.

ChemMedChem
DOI: **10.1002/cmdc.201200349**





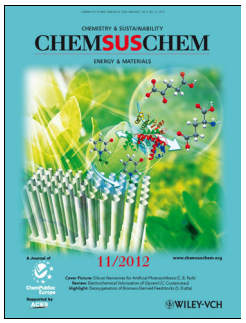
Water Splitting

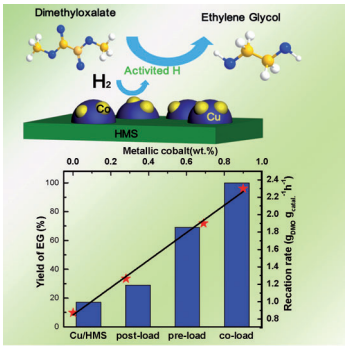
S. Hansen, M.-M. Pohl, M. Klahn, A. Spannenberg, T. Beweries*

Investigation and Enhancement of the Stability and Performance of Water Reduction Systems based on Cyclometalated Iridium(III) Complexes

Teamwork 2.0: A highly active system for photocatalytic water reduction consisting of an Ir photosensitiser and a Pd dichloro complex as the source of catalytically active Pd^0 is described. Additionally, the introduction of a hitherto unknown dinuclear Co complex as a water reduction centre resulted in a system with a comparably high initial activity.

ChemSusChem
DOI: **10.1002/cssc.201200617**





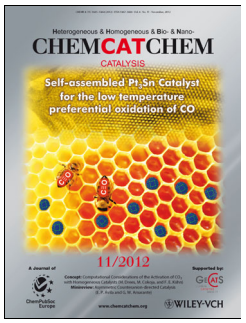
Hydrogenation

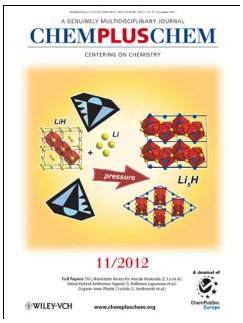
C. Wen, Y. Cui, A. Yin, K. Fan, W.-L. Dai*

Remarkable Improvement of Catalytic Performance for a New Cobalt-Decorated Cu/HMS Catalyst in the Hydrogenation of Dimethyloxalate

Evaporate to invigorate: The catalytic activity of the Cu/HMS catalyst is greatly enhanced by decorating with only 1 wt.% of cobalt. The co-ammonia-evaporation method leads to stronger interactions between the copper and cobalt species and more metallic cobalt may facilitate the activation of hydrogen.

ChemCatChem
DOI: **10.1002/cctc.201200444**



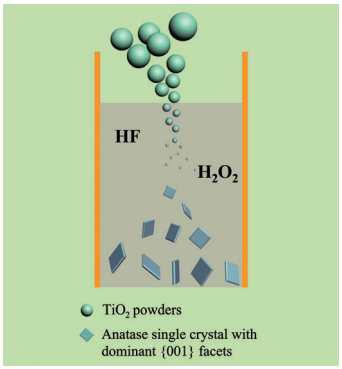


Anatase Single Crystals

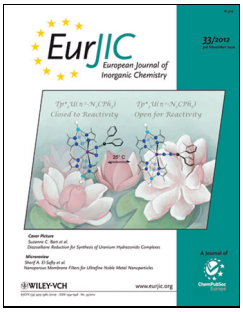
H. Li, Y. Zeng, T. Huang, L. Piao,* M. Liu*

Controlled Synthesis of Anatase TiO_2 Single Crystals with Dominant {001} Facets from TiO_2 Powders

Easy does it: Anatase TiO_2 single crystals with dominant {001} facets have been fabricated in a controlled manner from TiO_2 powders through a facile route (see figure). The obtained crystals show a superior photoreactivity to that of P25 TiO_2 powders, thus opening a new avenue to the preparation of highly active TiO_2 single crystals with {001} facets from low-cost TiO_2 powders.



ChemPlusChem
DOI: **10.1002/cplu.201200158**

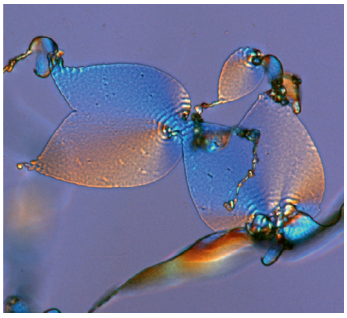


Silica–Carbonate Materials

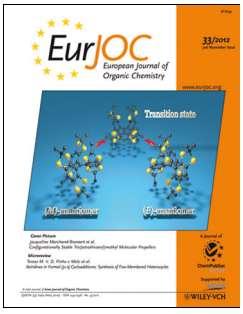
M. Kellermeier,* H. Cölfen,* J. M. García-Ruiz*

Silica Biomorphs: Complex Biomimetic Hybrid Materials from "Sand and Chalk"

When crystallized in the presence of silica, alkaline earth carbonates can self-assemble into elaborate nanoparticle superstructures showing curved morphologies and a level of hierarchy reminiscent of biominerals. This review summarizes recent work on these so-called silica biomorphs, focusing on structural aspects and the underlying mechanism of formation.



Eur. J. Inorg. Chem.
DOI: **10.1002/ejic.201201029**

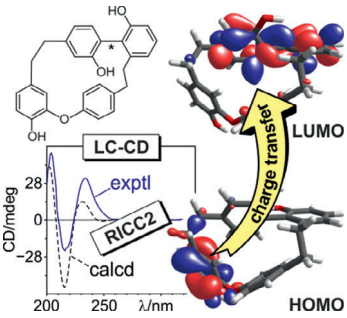


Chiral Macrocycles

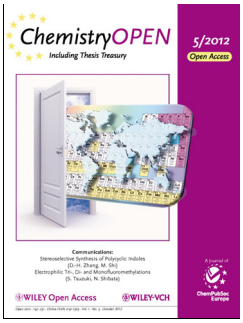
A. Schaumlöffel, M. Groh, M. Knauer, A. Speicher,* G. Bringmann*

Configurational Assignment of Cyclic Bisbibenzyls by HPLC-CD and Quantum-Chemical CD Calculations

The chiroptical properties of atropo-enantiomeric plagiochins and riccardins are investigated by means of HPLC-CD in combination with quantum-chemical CD calculations. An increased degree of charge-transfer in the excited states makes the use of the coupled-cluster method mandatory to unambiguously determine the absolute configuration.



Eur. J. Org. Chem.
DOI: **10.1002/ejoc.201200873**

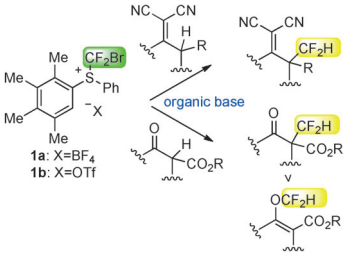


Difluoromethylation

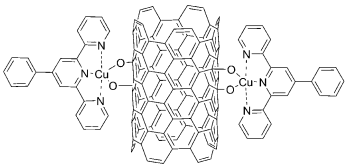
G. Liu, X. Wang, X. Lu, X.-H. Xu, E. Tokunaga, N. Shibata*

Efficient Difluoromethylation of sp^3 Carbon Nucleophiles by Bromodifluoromethylation Reagents with Organic Bases

Bromodifluoromethylation reagents **1** can be used during electrophilic difluoromethylation for sp^3 carbon nucleophiles mediated by organic bases. Allylic difluoromethylation of dicyanoalkylidens proceeds nicely by **1** in the presence of P_1 base to give CF_2H instead of CF_2Br products in high to excellent yields. A wide range of β-ketoesters are also efficiently reacted with **1**, mediated by DBU to provide C–CF_2H compounds as major products with a small amount of O–CF_2H products in high to excellent yields.



ChemistryOpen
DOI: **10.1002/open.201200033**

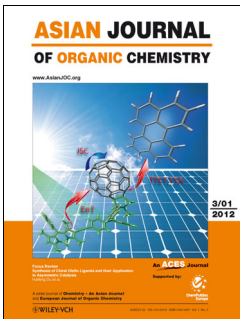


Synthetic Methods

H. Sharghi,* S. Ebrahimpourmoghaddam, M. M. Doroodmand,* A. Purkhosrow

Synthesis of Vasorelaxaing 1,4-Disubstituted 1,2,3-Triazoles Catalyzed by a 4′-Phenyl-2,2′:6′,2″-Terpyridine Copper(II) Complex Immobilized on Activated Multiwalled Carbon Nanotubes

One, two, three: A one-pot, two-step, regioselective, efficient, mild, and environmentally benign three-component synthesis of diverse 1,4-disubstituted 1,2,3-triazoles catalyzed by a heterogeneous terpyridine system has been developed. The exceptional efficacy of the terpyridine framework as a copper scavenger guarantees negligible leaching of copper from the catalyst. The triazole derivatives are potentially valuable therapies for hypertension.



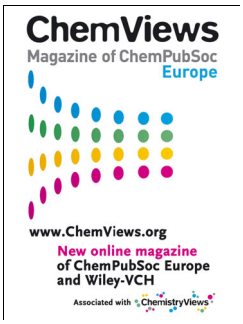
Asian J. Org. Chem.
DOI: **10.1002/ajoc.201200012**

Chemical Education

Vera Köster

Where Chemical Education is Heading: Interview with Peter Mahaffy

Peter Mahaffy, Professor at King's University College, Canada, has served as Chair of IUPAC's Committee on Chemistry Education. He talks to *ChemViews magazine* about the challenges in chemistry education and how to make the best use of multimedia and visualization techniques.



ChemViews magazine
DOI: **10.1002/chemv.201200109**